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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/670,577   | 09/25/2003  | Colin Frank          | CE10471R            | 7449             |
| 22917  | 7590        | 02/23/2006           | EXAMINER            |                  |
| MOTOROLA, INC.<br>1303 EAST ALGONQUIN ROAD<br>IL01/3RD<br>SCHAUMBURG, IL 60196 |             |                      | PAN, YUWEN          |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2682                |                  |

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                              |  |
|------------------------------|-------------------------------|------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/670,577 | Applicant(s)<br>FRANK, COLIN |  |
|                              | Examiner<br>Yuwen Pan         | Art Unit<br>2682             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 10-14 and 18-34 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5, 10-14, 18-24, 27-30, 33 and 34 is/are rejected.  
7) ☒ Claim(s) 25, 26, 31 and 32 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1-5, 10-14, 18-24, 27-30, 33 and 34 rejected under 35 U.S.C. 102(e) as being anticipated by Mesecher et al (US006574271B2).

Per claim 1, Mesecher discloses a method for allocating a shared communication channel among a plurality of beams in a communication system comprising a switched beam antenna system, wherein the shared communication channel comprises a plurality of orthogonal codes (see column 3 and lines 20-35), wherein the method comprises: measuring a quality of a propagation channel associated with each beam of the plurality of beams (see column 3 and lines 35-45); allocating a first portion of the plurality of orthogonal codes to a first beam of the plurality of beams and a second portion of the plurality of orthogonal codes to a second beam of the plurality of beams, wherein the first and second portions are a function of the measured quality of the propagation channels between a base station and mobile stations in the first beam

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and between the base station and mobile station in the second beam (see figure 14, column 6 and lines 1-6).

Per claim 2, Mesecher further teaches scheduling a first mobile station for the first beam, scheduling a second mobile station for the second beam; transmitting the first portion of the plurality of orthogonal codes to the first mobile station via the first beam; and transmitting the second portion of the plurality of orthogonal codes to the second mobile station via the second beam (see figure 14); wherein the first and second portions of the plurality of orthogonal codes are based on the measured quality of the propagation channels between the base station and the first mobile station in the first beam and the quality of the propagation channel between the base station and the second mobile station in the second beam (see column 3 and lines 30-44).

Per claims 3-5, since Mescher teaches a CDMA communication system, it is inherent that at least one control channel is assigned for each mobile terminal within the system and the voice data or traffic information is combined with the orthogonal codes.

Per claim 10, Mescher further teaches the communication system is divided into a plurality of geographic sectors, and wherein each beam of the plurality of beams is transmitted in a same sector of the plurality of sectors (see column 2 and lines 1-9).

Per claim 11, it is inherent that for a CDMA communication system with antenna array has approximately same proportion of a total transmitted power for the sector that includes the

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beams because relatively speaking when the cell is evenly divided into sectors, the power provided among the sectors need to be relatively equal to each other.

Per claim 12, it is inherent for a CDMA communication system with antenna array to have more power shares when there is more average traffic load with the beam's coverage.

Per claim 13, the claim is interpreted and rejected for the same reason as set forth in claim 1.

Per claim 14, the claim is interpreted and rejected for the same reason as set forth in claim 2.

Per claims 18-20, the claim is interpreted and rejected for the same reason as set forth in claim 3-5.

Per claim 22, the claim is interpreted and rejected for the same reason as set forth in claim 10.

Per claim 23, the claim is interpreted and rejected for the same reason as set forth in claim 11.

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Per claim 24, the claim is interpreted and rejected for the same reason as set forth in claim 12.

Per claim 27, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Per claim 28, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Per claim 29, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Per claim 33, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Per claim 34, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Per claim 30, Mesecher further teaches that the base station system comprises a plurality of weighters, wherein each weighter of the plurality of weighters is coupled to the processor and is further coupled to an array element of the plurality of array elements, and wherein the processor conveys a plurality of sets of weighting coefficients to the weighters (see figure 16 and column 6 and lines 20-30).

*Allowable Subject Matter*

4. Claims 25, 26, 31 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior art of record doesn't teaches that if no demand for the shared channel exists in the second beam for a given time slot, transmits the same shared channel transmission in the second beam as in the first beam and if no demand for the shared channel exists in the second beam for a given time slot, transmits noise in the second beam using the orthogonal codes of the shared data channel unused by the first beam.

*Conclusion*

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuwen Pan whose telephone number is 571-272-7855. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Yuwen Pan  
February 17, 2006

A handwritten signature in black ink, appearing to read 'Doris To', with a stylized flourish at the end.

**DORIS H. TO**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**